

**GOVERNMENT/INDUSTRY CHARTING FORUM**  
**Instrument Procedures Group**  
**October 25-26, 2004**  
**HISTORY RECORD**

**FAA Control # 04-02-258**

**SUBJECT:** Vertical Navigation (VNAV) Approach Procedures Using DA(H);  
OpSpec C073

**BACKGROUND/DISCUSSION:** Flight Standards issued Handbook Bulletin for Air Transportation (HBAT) 99-08, titled "Vertical Navigation (VNAV) Approach Procedures Using DA(H); OpSpec C073" on July 13, 1999. This Bulletin provides the applicable procedures, operating criteria, and revisions to the operator's operations specifications (OpSpecs), if applicable, to permit additional use of Vertical Navigation (VNAV) capability of Flight Management Systems (FMS) for instrument approach. This bulletin defines a new term, "decision altitude" (DA(H)) for the use of VNAV in conducting certain instrument procedures. Additionally criteria and procedures are provided to authorize the use of the minimum descent altitude (height) (MDA) as a decision altitude (height) [DA(H)] for certain existing instrument approach procedures meeting specified obstacle assessment provisions. This bulletin is applicable to operators conducting operations in accordance with Title 14 Code of Federal Regulations (14 CFR) parts 121, 125, 135, or 129.

It is apparent to AFS-410 that certain technical aspects of this Bulletin are flawed. Specifically, the Bulletin does not provide satisfactory guidance to operators on the method of determining if a visual segment assessment has been made by the FAA in which no penetrations to the 34/1 surface were identified, or the appropriate criteria for industry assessment of the visual segment. In addition, it allows *carte blanche* application of the operational concept of using the MDA as a DH in cases where the underlying non-precision approach may not be suitable. Finally, the Bulletin provides no authority for Part 91 operators to use this capability.

The operational environment has also changed in the intervening five years. The FAA has aggressively pursued the implementation of LNAV/VNAV procedures with DHs, including the development of 715 such procedures as of September 2004.

A PowerPoint presentation concerning this issue is provided.

**RECOMMENDATION:** The instrument procedures group needs to consider this issue with the goal of developing a strategy to offer this capability to a wider set of users (include Part 91) and to accurately identify those procedures which can support the use of the MDA as a DH by LNAV/VNAV equipped aircraft.

**COMMENTS:** This affects FAA OpSpecs, FAA Handbooks and Orders, the Aeronautical Information Manual, the Aeronautical Information Publication, and Charting.

**Submitted by:** Hooper Harris

**Organization:** Manager, Flight Operations Branch, AFS-410

**Phone:** (202) 385-4625

**E-mail:** [hooper.harris@faa.gov](mailto:hooper.harris@faa.gov)

**Date:** October 25, 2004

**INITIAL DISCUSSION (Meeting 04-02):** New issue introduced by Hooper Harris, AFS-410. AFS-410 is concerned that certain technical aspects of Flight Standards Handbook Bulletin for Air Transportation (HBAT) 99-08 may be flawed. Specifically, the Bulletin introduces the term DA(H) for the use of VNAV in conducting certain IAPs. However, it does not provide satisfactory guidance to operators on the method of determining if a visual segment assessment has been made by the FAA to validate there are no penetrations to the 34:1 surface, or the appropriate criteria for industry assessment of the visual segment. In addition, it allows *carte blanche* application of the operational concept of using the MDA as a DA in cases where the underlying non-precision approach may not be suitable. Finally, the Bulletin provides no authority for Part 91 operators to use this capability. It was pointed out by representatives of Jeppesen that these actions by FAA represented a major impact on Jeppesen since the company responded years ago, and at the insistence of many Part 121 and 135 operators, took action to include applicable notations on its IAP charts based on the FAA's original HBAT 99-08 and associated criteria. The action was made at the request of the Air Transport Association and several major airlines/operators who incorporated VNAV operations and the 'DA in lieu of MDA maneuver' extensively into their pilot training programs. Hooper stated that AFS-410 will lead an ad hoc group to refine technical standards for pilot use of a MDA as a DA and develop charting standards to indicate where the application may be used. In addition to the AFS-410 staff, volunteers for the ad hoc group include Michael Riley, NGA, Debbie Copeland, NACO, Brad Rush, NFPO, Tom Schneider and Bill Hammett, AFS-420, Randy Kenagy, AOPA, Mitch Scott, Continental Airlines, Ted Thompson, Jeppesen, Kelly Mckee, MITRE, Kevin Comstock, ALPA, Valerie Watson, NFDC, and Bob Conyers, NBAA. Ted questioned when and how the subject would be brought to the attention of the ATA FMS/RNAV Task Force and ATA Chart & Data Display Committees. Hooper recommended and the ACF members agreed that the ad-hoc working group should first examine the issues. Hooper also requested that all participants review the HBAT and provide input through the ACF-IPG. A copy of Hooper's briefing slides was included as attachment 4 of the meeting minutes. **ACTION: AFS-410.**

---

**MEETING 05-01:** Vinny Chirasello, AFS-410, briefed that no action has been taken on this issue. AFS-410 is undergoing a management change and the staff specialist who was assigned this project passed away. The project has been re-assigned; however, the ad-hoc group has not met. Randy Kenagy, AOPA, asked if the group membership is the same and Vinny replied yes. **ACTION: AFS-410.**

---

**MEETING 05-02:** Vinny Chirasello, AFS-410, briefed that his office is in the process of re-writing HBAT 99-08 to require a clear 34:1 surface for use of MDA as DA. Discussion addressed the methodology for indicating a clear 34:1 surface. Current charting specifications use a "stipple" (shaded area from MDA to threshold) to indicate a clear 34:1 for RNAV approaches. However, there are no plans under consideration for a charting specification for conventional approaches. Ted Thompson, Jeppesen, reminded the group that AFS-410 took an IOU when the issue was first presented at meeting 04-02 convene an ad hoc group to refine technical standards for pilot use of a MDA as a DA as well as to develop charting specifications to indicate when the application may be used. However, the group has never convened; ergo, Jeppesen has made no charting changes. Vinny responded that his office believes the HBAT should be revised prior to calling a meeting. (**Editor's note:** *Volunteers for the ad hoc group are listed in the discussion at meeting 04-02 above.*) **ACTION: AFS-410.**

---

**MEETING 06-01:** Vincent Chirasello, AFS-410, briefed that the status is unchanged. Hopefully, staff additions will expedite a response. He also noted that the effort to harmonize minimums may impact the issue. Ted Thompson, Jeppesen, noted that the resolution must consider the implications regarding how many VNAV procedures can be in a database. Harmonized minima will allow credit for a constant descent final approach (CDFA); therefore, if the vertical descent angle (VDA) is removed, what is the impact on the database? Ted also reminded Vinnie that AFS-410 has still not convened the ad-hoc committee. Vinnie responded that the group would be convened when the draft HBA 99-08 was complete. **ACTION: AFS-410.**

---